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THE EAST GERMAN IFA F 9 AUTOMOBILE

Neues Deutschland
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/Comment: The following information was taken from an article by Chief Engineer Siegfried Rauch, Karl-Marx-Stadt. The following three photographs of the automobile, not reproduced herein, are available in the original document. (1) view of the interior of the automobile, (2) exterior view, and (3) view of the three-cylinder, two-cycle engine./

The innovations in the construction of the F 9 automobile appear in the transmission, i.e., the engine and gears, the power transmission, and the drive components. The three-cylinder, two-cycle engine is mounted lengthwise in the vehicle. Two-cycle engines, if properly designed and built, are simple, light, dependable, long-lasting, and efficient. It is no exaggeration to say that many engineers consider this engine to be the engine of the future because of its many advantages. The water-cooled engine has a cylinder bore of 70 millimeters, and a piston stroke of 73 millimeters, giving it a total piston displacement of approximately 900 cubic centimeters. It has a power output of a full 30 horsepower at a speed of 3800 revolutions per minute.

In contrast to other well known two-cycle engines, the F 9 engine does not have a separate crankcase. The cylinder block and housing are made of a single casting for production reasons. A sealing pan /oil pan?/ is screwed to the bottom of this unit, and the light-metal cylinder head is mounted on top. The triple-throw crankshaft is mounted throughout on antifriction bearings. All internal engine parts are lubricated by adding motor oil to the fuel in the ratio of 1:25. The combustion mixture is fed into the engine by a modern, economical, float-type carburetor, made by the People-Owned Berlin Carburetor Factory. The car has a battery-type ignition. All parts of the ignition system, i.e., battery, generator (driven by a belt which also operates the cooling fan), distributor, ignition coil, spark plugs, and starter, are VEB IKA (People-Owned Enterprise for Electrical Installations, Cable, and Equipment) products.

In order to allow for maximum space in the interior of the car, the engine has been placed far forward. Engine and gears are mounted on the chassis on rubber blocks at three points. The flywheel, which is located on the end of the drive shaft, has a plate clutch from which power is transmitted to the transmission. To be able to put the maximum weight on the powered front wheels, on the one hand, and to concentrate the gears about the driving axle, on the other hand, the light-alloy housing for clutch and gear has been so constructed that the differential, with its two lateral drive shafts to the front wheels, is located in the center, the engine and clutch are located at the front, and the four-position transmission is located at the rear. The free-wheeling clutch, which is similar in operation to the coaster arrangement on a bicycle, is also located at the end of the housing. The free-wheeling clutch makes it possible to reduce wear on the engine and to conserve fuel.

Shifting, performed by means of a gearshift lever located near the steering wheel, is silent and effortless. The front wheels are powered from the differential via two connections on either side. The so-called front-wheel drive constitutes one of the reasons for the excellent roadability of the F 9, because it makes the car very stable, even on wet surfaces.

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The chassis, with its tubular frame construction, is similar to that of the time-tested F 8. In particular, the steering mechanism, the suspension, and the damping features of both the front and the rear wheels are similar to those of the F 8. There are basic differences between the F 8 and the F 9, however. For example, the shortening of the wheel base to 2,350 millimeters, coupled with placement of the engine ahead of the driving axle, and careful suspension, have resulted in greatly improved roadability.

The IFA F 9 is equipped with four-wheel hydraulic brakes. The master brake cylinder is constructed according to a new principle [not further specified], and is produced by one of the IFA factories.

The F 9 has an all-steel body, designed according to aerodynamic principles so that maximum speeds may be attained with a minimum of fuel consumption. The car is produced in closed sedan, open-top, and combination models, for sale in the export market as well as in the domestic market.

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